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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,703	01/02/2004	Arjun Chandrasekar Iyer	SBL0011C1US	3820

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EXAMINER
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HARPER, LEON JONATHAN

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/750,703	<b>Applicant(s)</b> CHANDRASEKAR IYER ET AL.	
	<b>Examiner</b> LEON HARPER	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 116-163 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 116-163 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/30/2009 has been entered. Pursuant to the request claims 116, 128, 133, 137, 142-143, 146, 148, 151-152, 155, 157, 160-161 have been amended. No claims have been added or cancelled. Accordingly, claims 116-163 are pending in this office action.

### ***Response to Arguments***

Applicant's arguments with respect to claims 116-163 have been considered and accepted with respect to the limitation of "the querying the first table and the querying the second table are performed without joining the first and second table". However the arguments are moot in view of the new ground(s) of rejection set forth below.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 116-163 rejected under 35 U.S.C. 103(a) as being unpatentable over 5,864,842 (hereinafter Pederson) in view of US 6564204 (hereinafter Amundsen).

As for claim 116 Pederson discloses: generating, using a processor a set of SQL statements to query a first table and a second table (See column 4 lines 25-30), wherein the first table and the second table are stored in a computer-readable storage medium, and the generating uses a relationship between the first table and the second table to construct the set of SQL statements, and the set of SQL statements comprises SQL statements other than a statement that joins the first and second tables querying the first table using the set of SQL statements to produce a first result set (See column 4 lines 35-47);

wherein the querying the first table is performed using the processor and ,joining using the processor the first result set and the second result set to produce a third result set (See column 4 lines 50-57). Pederson does not disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor, and the querying the first table and

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the querying the second table are performed without joining the first table and the second table. Amundsen however does disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor (See column 12 lines 40-55), and the querying the first table and the querying the second table are performed without joining the first table and the second table (See column 11 lines 50-60). It would have been obvious to an artisan of ordinary skill in the pertinent art at the time the invention was made to have incorporated the teaching of Amundsen into the system of Pederson. The modification would have been obvious because the two references are concerned with the solution to the problem of data processing, therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Amundsen's teaching would enable users of the Pederson system to not compute the results of the join operations (See Amundsen column 4 lines 30-50 noting that it is too time consuming to compute every join operation).

As for claim 117 the rejection of claim 116 is incorporated and further Pederson discloses: a parent/child relationship between the first and second tables, wherein one of the first and second tables is a parent table, and if the first table is the parent table,

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the second table is a child table, and if the second table is the parent table, the first table is the child table (See figure 4).

As for claim 118 the rejection of claim 117 is incorporated and further Pederson discloses: querying the parent table using the set of SQL statements to produce the result set; and using the first result set in constructing a second set of SQL statements to query the child table, wherein the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table (See column 7 lines 15-25).

As for claim 119 the rejection of claim 118 is incorporated and further Pederson discloses: querying the child table using the second set of SQL statements to produce the second result set (See column 6 lines 40-50).

As for claim 120 the rejection of claim 119 is incorporated and further Pederson discloses returning the third result set as a result of the query of the first and second tables (See column 6 lines 40-50).:

As for claim 121 the rejection of claim 118 is incorporated and further Pederson discloses: the second set of SQL statements comprises: a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the first result set (See column 6 lines 30-45 ).

As for claim 122 the rejection of claim 116 is incorporated and further Pederson discloses: using the first result set in constructing a second set of SQL statements to query the second table, wherein the second set of SQL statements comprises SQL statements other than a second statement that joins the second table to another table (See column 6 lines 35-50)

As for claim 123 the rejection of claim 122 is incorporated and further Pederson discloses: querying the second table using the second set of SQL statements to produce the second result set (See column 6 lines 40-50),

As for claim 124 the rejection of claim 123 is incorporated and further Pederson discloses: returning the third result set as a result of the query of the first and second tables (See column 6 lines 35-55).

As for claim 125 the rejection of claim 122 is incorporated and further Pederson discloses: a query statement for selecting a record having a value of a foreign key field of the second table equal to a value of a target key field in the result set (See column 7 lines 5-15).

As for claim 126 the rejection of claim 116 is incorporated and further Pederson discloses: obtaining a search specification for the query of the first and second tables,

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wherein the set of SQL statements comprises a query statement to select a record from at least one of the first and second tables if the record satisfies the search specification (See column 6 lines 40-45).

As for claim 127 the rejection of claim 126 is incorporated and further Pederson discloses: executing the set of SQL statements to produce the third result set; and returning the third result set in response to the search specification (See column 6 lines 35-55).

As for claim 128 Pederson discloses: a processor; a memory unit coupled to the processor (See column 3 lines 1-6); generating means for generating a set of SQL statements to query a first table and a second table (See column 4 lines 25-30), wherein the generating means uses a relationship between the first table and the second table to construct the set of SQL statements, and the set of SQL statements comprise SQL statements other than a statement that joins the first and second tables; determining means for determining if a parent/child relationship exists between the first and second tables; first querying means for querying the first table using the set of SQL statements to produce a first result set (See column 4 lines 35-47); joining means for joining the first result set and the second result set to produce a third result set, wherein the generating means, the determining means, the first querying means, the second querying means and the joining means reside in the memory unit (See column 4 lines 50-57). Pederson does not disclose querying the second table using the set of SQL statements to produce



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a second result set wherein the querying the second table is performed using the processor, and the querying the first table and the querying the second table are performed without joining the first table and the second table. Amundsen however does disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor (See column 12 lines 40-55), and the querying the first table and the querying the second table are performed without joining the first table and the second table (See column 11 lines 50-60). It would have been obvious to an artisan of ordinary skill in the pertinent art at the time the invention was made to have incorporated the teaching of Amundsen into the system of Pederson. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Amundsen's teaching would enable user's of the Pederson system to not compute the results of the join operations (See Amundsen column 4 lines 30-50 noting that it is was to time consuming to compute every join operation).

As for claim 137 Pederson discloses: generating, using a processor a set of SQL statements to query a first table and a second table (See column 4 lines 25-30), wherein the first table and the second table are stored in a computer-readable storage medium,

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and the generating uses a relationship between the first table and the second table to construct the set of SQL statements, and the set of SQL statements comprises SQL statements other than a statement that joins the first and second tables querying the first table using the set of SQL statements to produce a first result set (See column 4 lines 35-47);

wherein the querying the first table is performed using the processor and ,joining using the processor the first result set and the second result set to produce a third result set (See column 4 lines 50-57). Pederson does not disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor, and the querying the first table and the querying the second table are performed without joining the first table and the second table. Amundsen however does disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor (See column 12 lines 40-55), and the querying the first table and the querying the second table are performed without joining the first table and the second table (See column 11 lines 50-60). It would have been obvious to an artisan of ordinary skill in the pertinent at the time the invention was made to have incorporated the teaching of Amundsen into the system of Pederson. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention

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was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Amundsen's teaching would enable user's of the Pederson system to not compute the results of the join operations (See Amundsen column 4 lines 30-50 noting that it is was to time consuming to compute every join operation).

Claims 138 -145 are all computer product claims all comprising substantially the same limitations as claims 117-127 and are thus rejected for the same reasons as set forth in the rejection of claims 117-127.

As for claim 146 Pederson discloses: generating, using a processor a set of SQL statements to query a first table and a second table (See column 4 lines 25-30), wherein the first table and the second table are stored in a computer-readable storage medium, and the generating uses a relationship between the first table and the second table to construct the set of SQL statements, and the set of SQL statements comprises SQL statements other than a statement that joins the first and second tables querying the first table using the set of SQL statements to produce a first result set (See column 4 lines 35-47);

wherein the querying the first table is performed using the processor and ,joining using the processor the first result set and the second result set to produce a third result set (See column 4 lines 50-57). Pederson does not disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying

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the second table is performed using the processor, and the querying the first table and the querying the second table are performed without joining the first table and the second table. Amundsen however does disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor (See column 12 lines 40-55), and the querying the first table and the querying the second table are performed without joining the first table and the second table (See column 11 lines 50-60). It would have been obvious to an artisan of ordinary skill in the pertinent art at the time the invention was made to have incorporated the teaching of Amundsen into the system of Pederson. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Amundsen's teaching would enable user's of the Pederson system to not compute the results of the join operations (See Amundsen column 4 lines 30-50 noting that it is was too time consuming to compute every join operation).

Claims 146 -154 are all system claims all comprising substantially the same limitations as claims 117-127 and are thus rejected for the same reasons as set forth in the rejection of claims 117-127.

As for claim 155: generating, using a processor a set of SQL statements to query a first table and a second table (See column 4 lines 25-30), wherein the first table and the second table are stored in a computer-readable storage medium, and the generating uses a relationship between the first table and the second table to construct the set of SQL statements, and the set of SQL statements comprises SQL statements other than a statement that joins the first and second tables querying the first table using the set of SQL statements to produce a first result set (See column 4 lines 35-47);

wherein the querying the first table is performed using the processor and ,joining using the processor the first result set and the second result set to produce a third result set (See column 4 lines 50-57). Pederson does not disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor, and the querying the first table and the querying the second table are performed without joining the first table and the second table. Amundsen however does disclose querying the second table using the set of SQL statements to produce a second result set wherein the querying the second table is performed using the processor (See column 12 lines 40-55), and the querying the first table and the querying the second table are performed without joining the first table and the second table (See column 11 lines 50-60). It would have been obvious to an artisan of ordinary skill in the pertinent at the time the invention was made to have incorporated the teaching of Amundsen into the system of Pederson. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to combine these

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references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Amundsen's teaching would enable user's of the Pederson system to not compute the results of the join operations (See Amundsen column 4 lines 30-50 noting that it is was to time consuming to compute every join operation).

Claims 156 -163 are all system claims all comprising substantially the same limitations as claims 117-127 and are thus rejected for the same reasons as set forth in the rejection of claims 117-127.

### **Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEON HARPER whose telephone number is (571)272-0759. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*LJH*  
*Leon J. Harper*  
*June 3, 2009*

/Khanh B. Pham/

Primary Examiner, Art Unit 2166